DETAILED ACTION

Response to Amendment

1.   In response to communications filed on 02/07/2008, the Examiner acknowledges

the amendments made to the claims and have both considered and applied them to the

claims.

        This Office Action reflects the amendments made with communications filed

02/07/2008, but not reflected in the Office Action response dated 04/28/2008. In this

Action the amendments to the claims have been applied and are addressed as detailed

below.

        Claims 1-11 are presented for examination.

Response to Remarks/Arguments

1.1   Applicant's arguments, with respect to the rejection of claims 1-11 have been

fully considered but they are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Malinen et al. (U.S. Patent Application Publication No. 2005/0078824 A1) in view

of Quick ("Common Security Algorithms" - 3rd Generation Partnership Project 2.

Qualcomm Incorporated, July 10, 2002,).

Regarding claims 1 and 11, Malinen et al., discloses a method of authenticating a

user identity module implemented in an access terminal, comprising:

Receiving, at the access terminal and over an air interface, a first challenge

associated with a first authentication process (0075 – "On receiving the message

the AS first identifies the AuC holding the authentication information for the user.

(this first identification is equated to the first authentication" and "[Access Server

(AS)] creates the Extensible Access protocol (EAP) Request/AKA/Challenge

message containing the AT_RAND value, the AT_AUTN value, and the AT_MAC

value") is equated to the first challenge; deriving, at the access terminal, a

second challenge associated with a second authentication process based on at

least a portion of the first challenge (0075 – "[Access Server (AS) creates and]

sends a message, containing the EAP Request/AKA/Challenge message in it

and the NAI identifying the user (in the User-Name attribute), to the AC.") is

equated to the second challenge; performing, at the user identity module, the

second authentication process using the derived second challenge and

producing at least one authentication parameter therefrom (0077 – "When the

terminal receives this message, it first extracts the EAP Request/AKA/Challenge

message. It then uses the AKA to calculate the AT_RES values, giving the

AT_RAND and AT_MAC values received inside the EAP

Request/AKA/Challenge as input to the AKA. It also calculates the AT_AUTN

value and compares it to the AT_AUTN received in the EAP

Request/AKA/Challenge. If these values match, the EAP

Request/AKA/Challenge message is authenticated successfully.");

Deriving, at the access terminal, a key associated with the first authentication

process based on the at least one authentication parameter (0056 – "Several

authentication mechanisms may be used. In the following description of the

preferred embodiments, EAP-AKA (Authentication and Key Agreement)

authentication mechanism using USIM (Universal Subscriber Identity Module)

(first embodiment) and an authentication mechanism using R-UIM (removable

user identity module) applying a CAVE (Cellular Authentication and Voice

Encryption) algorithm (second embodiment) are taken as examples").

Malinen et al. is silent in disclosing performing an authentication using the RAND

challenge to produce a SMEKEY and a PLCM (0152-0154 and 0147-0157); and

deriving a secret CHAP key based on the SMEKEY and PLCM., however

Malinen et al. does disclose "an authentication mechanism using … a Cellular

Authentication and Voice Encryption (CAVE) algorithm, or a USIM applying te

AKA algorithm (0030-0031)," this disclosure in combination with the Quick

disclosure of, creating "the CDMA private long code mask (PLCM) and the

message encryption key CMEAKEY for intersystem handoff from a system using

AKA to a system using older (2G) algorithms for authentication and privacy. (On

the ANS-41 network, these keys are referred to as CDMA_PLCM and SMEKEY.)

"(Quick page 9). It would have been obvious for one of ordinary skill in the art to

have modified the disclosed CDMA private long code mask (PLCM) and the

message encryption key CMEAKEY of Quick into the SMEKEY and PLCM of the

instant application because these terminologies are used interchangeably.

Regarding claim 2, Malinen et al., discloses a method, as set forth in claim 1,

wherein receiving the first challenge associated with the first authentication

process further comprises receiving a CHAP challenge (0152 – "packet data

sessions via a PDSN, as is currently done with EAP-CHAP").

Regarding claim 3, Malinen et al., discloses a method, as set forth in claim 2,

wherein deriving the second challenge associated with the second authentication

process based on at least a portion of the first challenge further comprises

deriving a RAND challenge based on at least a portion of the CHAP challenge

("[Access Server (AS)] creates the Extensible Access protocol (EAP)

Request/AKA/Challenge message containing the AT_RAND value, the

AT_AUTN value, and the AT_MAC value") is equated to the first challenge and

"a message, containing the EAP Request/AKA/Challenge message in it and the

NAI identifying the user (in the User-Name attribute), to the AC.") is equated to the second challenge).

Regarding claim 4, Malinen et al., discloses a method, as set forth in claim 3, wherein deriving the RAND challenge based on at least a portion of the CHAP challenge further comprises deriving the RAND challenge from a selected number of least significant bits in the CHAP challenge (0152-0154).

Regarding claim 5, Malinen et al., discloses a method, as set forth in claim 4, wherein performing the second authentication process using the derived second challenge and producing at least one authentication parameter therefrom further comprises performing a CAVE based authentication process on the RAND challenge to produce SMEKEY (0030, 0056, 0144-146 and rejected the same rationale as claim 1).

Regarding claim 6, Malinen et al., discloses a method, as set forth in claim 5 wherein performing the CAVE based authentication process on the RAND challenge to produce SMEKEY further comprises performing the CAVE based authentication process on the RAND challenge to produce SMEKEY and PLCM. (Rejected under the same rationale as claim 1).

Regarding claim 7, Malinen et al., discloses a method, as set forth in claim 6,

wherein deriving the key associated with the first authentication process based

on the at least one authentication parameter further comprises deriving the key

associated with the first authentication process based on SMEKEY and PLCM

(Rejected under the same rationale as claim 1).

Regarding claim 8, Malinen et al., discloses a method, as set forth in claim 1,

further comprising: generating, at the access terminal, an authentication

response based on the key and delivering the authentication response over the

air interface to a network to request access to the network (0056-0060).

Regarding claim 9, Malinen et al., discloses a method, as set forth in claim 8,

further comprising: determining that the first challenge associated with the first

authentication process is a re-authentication challenge (0073-0074); bypassing

the derivation of the second challenge associated with the second authentication

process based on at least a portion of the first challenge in response to the

determining that the first challenge is the re-authentication challenge (0075);

bypassing the performance of the second authentication process using the

derived second challenge and producing at least one authentication parameter

therefrom in response to the determining that the first challenge is the re-

authentication challenge (0076-0079).

Malinen et al. is silent in disclosing the key associated with the first

authentication process based on the at least one authentication parameter

further comprises using a previously derived key in response to the

determining that the first challenge is the re-authentication challenge

(0056-0060 of Malinen et al.).

Regarding claim 10, Malinen et al., discloses a method, as set forth in claim 8,

further comprising: determining that the first challenge associated with the first

authentication process is a re-authentication challenge (0073-0074); and wherein

delivering the key to a network to request access to the network further

comprises delivering a previously derived key in response to the determining that

the first challenge is the re-authentication challenge (0076-0079).

Conclusion

3.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHINWENDU C. OKORONKWO whose telephone

number is (571)272-2662. The examiner can normally be reached on MWF 2:30 - 6:00,

TR 9:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nasser Moazzami can be reached on (571) 272 4195. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. C. O./

Examiner, Art Unit 2136

April 24, 2008

/Nasser G Moazzami/

Supervisory Patent Examiner, Art Unit 2136